

201-14523

Nguyet Phan

05/30/2003 02:40 PM

To: NCIC HPV, moran.matthew@epa.gov

cc:

Subject: Environmental Defense comments on 2-H-Benzimidazole-2-thione,  
1,3-dihydro-4 (or 5)-methyl-, Zinc Salt (CAS# 61617-00-3)

Nguyet Phan  
ASRC Aerospace  
OPPT Docket  
EPA Docket Center

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Richard\_Denison@environmentaldefense.org on 05/30/2003 09:57:28 AM

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Boswell/DC/USEPA/US@EPA, dbower@rtvanderbilt.com  
cc: MTC@mchsi.com, kflorini@environmentaldefense.org, rdenison@environmentaldefense.org

Subject: Environmental Defense comments on 2-H-Benzimidazole-2-thione, 1,3-dihydro-4 (or 5)-methyl-, Zinc Salt  
(CAS# 61617-00-3)

(Submitted via Internet 5/30/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov,  
boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and  
dbower@rtvanderbilt.com)

Environmental Defense appreciates this opportunity to submit comments on  
the robust summary/test plan for 2-H-Benzimidazole-2-thione, 1,3-dihydro-4  
(or 5)-methyl-, Zinc Salt (CAS# 61617-00-3).

The R.T. Vanderbilt Company, Inc. in response to EPA's High Production  
Volume (HPV) Challenge Program, has submitted a Robust Summary/Test Plan  
for 2-H-benzimidazole-2-thione, 1,3-dihydro-4 (or 5)-methyl-, zinc salt,  
also known as zinc mercaptotoluimidazole (ZMTI). According to the Test  
Plan, ZMTI is synthesized in a batch reaction process by reacting  
2-methylmercaptotoluimidazole with zinc oxide to form the insoluble zinc  
salt.

The sponsor indicates ZMTI is used as an antioxidant synergist in natural  
and synthetic rubber, where it improves the performance of the primary  
antioxidant. According to the Test Plan this is "the largest commercial  
use of ZMTI." This statement implies that there may be other significant  
uses, possibly including consumer uses, though they are not mentioned. If  
there are other significant uses, particularly consumer uses, they should  
be indicated in the Test Plan. The Test Plan also states that ZMTI is used  
in manufacturing plants in both North America and Western Europe. If that  
is the case, then it appears it is transported in significant quantities.  
Therefore, the methods of transport and precautions against human and  
environmental contamination should be described. And finally, the Test  
Plan only briefly mentions occupational exposure, implying it is of no  
concern because "The rubber and plastics additives industry has a long  
safety record and only sophisticated industrial users handle this  
material." This statement is both vague and un reassuring: one could  
equally cite the significant incidence of occupational cancer associated  
with this industry. We would prefer to see in the Test Plan a more  
substantive and complete description of exposure potential and the specific  
measures taken to prevent human and environmental exposures.

Although ZMTI has been used in very significant quantities for over 30 years, -according to the Test Plan,- data describing its toxicology are limited. The limited data that are included are sometimes described only cursorily in the Robust Summary. For example, the description of the inhalation study cited by the sponsor indicated that the study used groups of five animals and was conducted under GLP, but the description of results was limited to stating "there were no fatalities". It did not include such basic information as the effect of dose on lesions observed or physiological responses to dosing. Descriptions of other studies, e.g., dermal toxicity, are more complete and should serve as a model for presenting the other studies. We would like to see more consistently complete descriptions of all studies.

The limited mammalian toxicity data available indicate that ZMTI has moderate to low toxicity and is not genotoxic to bacteria. The sponsor's matrix of available and proposed studies presented in the Test Plan clearly indicates the SIDS elements not currently addressed by available data that will be addressed through new studies or calculated. Physical-Chemical and Environmental Fate SIDS elements not currently available will be calculated. All of the Ecotoxicity SIDS elements and most of the Mammalian Toxicity SIDS elements will be addressed by additional studies. Thus, we feel that, if the above deficiencies in describing available data are addressed, the Test Plan and Robust Summary for ZMTI will be satisfactory.

Thank you for this opportunity to comment.

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